

2. (Reiterated) The nucleic acid of claim 1, wherein the nucleic acid comprises a nucleotide sequence that encodes the amino acid sequence of SEQ ID NO:6.

3. (Reiterated) A substantially pure nucleic acid that has one or more Helios biological activity selected from the group consisting of:

(a) the ability to form a dimer with a Helios, Aiolos or Ikaros polypeptide;

(b) the ability to bind DNA; and

(c) the ability to stimulate transcription from an Ikaros binding site,

wherein the nucleic acid hybridizes to the nucleotide sequence of SEQ ID NO:5 under high stringency conditions (i) or (ii):

(i) hybridization in 480 ml formamide, 240 ml 20x SSC, 10 ml 2 M Tris.Cl, pH 7.6, 10 ml 100x Denhardts solution, 50 ml deionized water, 200 ml 50% dextran sulfate, and 10 ml 10% SDS; and wash in 0.2x SSC and .1% sodium dodecyl sulfate (SDS); or

(ii) hybridization in 1% crystalline bovine serum albumin (BSA), 1 mM EDTA, 0.5 M NaHPO₄, pH 7.2, and 7% SDS; and wash in 1 mM Na₂EDTA, 40 mM NaHPO₄, pH 7.2, and 1% SDS at 65°C.

5. (Reiterated) A substantially pure nucleic acid which (a) encodes a fragment of the polypeptide of SEQ ID NO: 6 of at least 60 amino acids in length and (b) hybridizes to the nucleotide sequence of SEQ ID NO:5 under high stringency conditions (i) or (ii):

(i) hybridization in 480 ml formamide, 240 ml 20x SSC, 10 ml 2 M Tris.Cl, pH 7.6, 10 ml 100x Denhardts solution, 50 ml deionized water, 200 ml 50% dextran sulfate, and 10 ml 10% SDS; and wash in 0.2x SSC and .1% sodium dodecyl sulfate (SDS); or

(ii) hybridization in 1% crystalline bovine serum albumin (BSA), 1 mM EDTA, 0.5 M NaHPO₄, pH 7.2, and 7% SDS; and wash in 1 mM Na₂EDTA, 40 mM NaHPO₄, pH 7.2, and 1% SDS at 65°C,

wherein the nucleic acid does not hybridize with an Ikaros gene or an Aiolos gene.

10. (Reiterated) A vector comprising the nucleic acid of any of claims 1, 2, or 3.

11. (Reiterated) A cell comprising the nucleic acid of any of claims 1, 2, or 3.

13. (Reiterated) A method of manufacturing an Helios polypeptide comprising culturing the cell of claim 11 in a medium to express the Helios polypeptide.

20. (Reiterated) A substantially pure nucleic acid encoding a polypeptide which differs at 1 or more residues, but less than 15 residues, from SEQ ID NO:6 and which has one or more Helios biological activity selected from the group consisting of:

- (a) the ability to form a dimer with a Helios, Aiolos or Ikaros polypeptide;
- (b) the ability to bind DNA; and
- (c) the ability to stimulate transcription from an Ikaros binding site.

21. (Reiterated) A substantially pure nucleic acid encoding a polypeptide of SEQ ID NO: 6.

23. (Reiterated) The nucleic acid of claim 1, wherein the nucleotide sequence encodes an amino acid sequence that is at least 95% identical to the amino acid sequence of SEQ ID NO:6.

24. (Reiterated) The nucleic acid of claim 1, wherein the nucleotide sequence encodes an amino acid sequence that is at least 98% identical to the amino acid sequence of SEQ ID NO:6. --